



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,896	02/20/2004	Ryutaro Oke	HITA-0517	4208
7590	02/26/2007		EXAMINER	
Stanley P. Fisher Reed Smith LLP Suite 1400 3110 Fairview Park Drive Falls Church, VA 22042-4503			NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2871	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/26/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

10

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/781,896	OKE ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Dung Nguyen	2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 21 November 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 2-15 is/are pending in the application.  
 4a) Of the above claim(s) 3 and 4 is/are withdrawn from consideration.  
 5) Claim(s) 2,5,6,11 and 12 is/are allowed.  
 6) Claim(s) 7-10,14-15 is/are rejected.  
 7) Claim(s) 13 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114; and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/21/2006 has been entered.
2. Applicants' amendment dated 11/21/2006 has been received and entered. By the amendment, claims 2, 5-15 are now pending in the application. Claims 3-4 stand withdrawn from consideration.

### ***Claim Rejections - 35 USC § 103***

1. Claims 7-10 and 14-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto, US Patent Application Publication No. 2004/0174484, in view of Takeda et al., US Patent No. 6,724,452, as stated in the final office action.

Regarding the above claims, Matsumoto's figures 3-4 which disclose a liquid crystal display device comprising:

- . an active matrix substrate (101) with a plurality of gate lines (102), drain lines (106), switching elements (TFTs), pixel electrodes (112), counter electrodes (111);
- . another substrate (201);
- . the counter electrode being above the drain line (see figure 4), having a groove (slit 115) extending along the drain line direction as claimed (see figure 3);

Art Unit: 2871

. an orientation film (116) as claimed.

Matsumoto does not disclose the groove not being cut through. Takeda et al. do disclose an electrode with a groove (depression 23A) (see figure 94). therefore, it would have been obvious to one skilled in the art at the invention was made to employ the Matsumoto's electrode having a groove that is not cut through the electrode as shown by Takeda to improve a viewing angle through the groove functioning as the domain regulating means (see col. 49 , ln. 38).

***Allowable Subject Matter***

2. Claims 2, 5, 6, 11 and 12 are allowed.
3. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. The following is a statement of reasons for the indication of allowable subject matter  
The references of record neither disclose nor make obvious a liquid crystal device comprising a combination of various elements as claimed, more specifically of the counter electrode has a groove which is recessed along the extending direction of the drain line between an end periphery of the counter electrode and the drain line such that the groove are formed at both sides of the drain line (claim 2) as well as a metal layer being formed between the groove and the orientation film (claim 11).

***Response to Arguments***

5. Applicants' arguments filed 11/21/2006 have been fully considered but they are not persuasive.

Applicants' argument is that the cite references and their combinations fail to teach or disclose "groove being recessed along an extending direction of the drain line, said groove is formed in a central part of the respective electrode without cutting therethrough". In particular, Applicants point out that:

- a. the depression 23A, 23B of Takeda formed onto the conductive layer, it is not directly formed onto a pixel or counter electrode.
- b. the depressions are formed at the edges of the cell electrodes, rather than a central part of the common or cell electrode.
- c. Takeda's protrusion 20B provides only a shielding effect, but does not prevent the pixel or counter electrode from peeling off as the invention

The Examiner is not convinced by this argument since the same is true of the Takeda et al. depression 23A, 23B. In particular,

- a. the limitations on which the Applicant relies (i.e., groove directly formed onto a pixel or counter electrode) are not stated in the claims. It is the claims that define the claimed invention, and it is the claims, not specifications flat arc anticipated or unpatentable.

Constant v. Advanced MicroDevices Inc. , 7 USPQ 2d 1064.

- b. Applicants appear to believe that the depression is formed at the edges of the electrode (as shown in figure 68); however, there is no limited to formed a groove (depression) at the edges of the electrode (e.g., depression, substituting protrusion, also formed at a

central part of the electrode, e.g., protrusion formed over the electrode as shown in figures 68 or 109B and 110).

- c. the limitations on which the Applicant relies (i.e., prevent the pixel or counter electrode from peeling off) are not stated in the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN  
02/20/2007

*Dung Nguyen*  
*Primary Examiner*  
*Art Unit 2871*